

a¹ a password verifying unit. The password preserving unit preserves a general access (default) input password and a password for access protection. When there is no password input from the user, the password verifying unit substitutes the default input password for the user input password and compares and collates the default input password with the password for access protection, thereby controlling the access protection. When there is a password input by the user, the user input password and the password for access protection are compared and collated, thereby controlling the access protection. Especially, when the password preserving unit preserves the same value as a default input password and a password for access protection, even if there is no password input by the user, the password verifying unit substitutes the default input password for the user input password and collates the default input password with the password for access protection, thereby permitting the access. According to the invention as mentioned above, when the default input password is stored on the storing apparatus side and there is no password input from the user, the password verification is performed by regarding the default input password as a user input password. Consequently, by setting the default input password and the password for access protection to the same value, even when the user does not input the password, the access is permitted and an access by an ordinary command can be performed and the password input by the user can be omitted.

Please replace the paragraph beginning on page ¹³~~4~~, line ²⁴~~2~~ with the following rewritten

paragraph:

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Fig. 1 is a block diagram of a hard disk drive (HDD) to which a password protection using a general access (default) input password of the invention is applied. In the hard disk drive, a magnetic disk medium is fixedly built in a drive main body. The hard disk drive is constructed by an enclosure 10 and a control board 12. The enclosure 10 has a head IC circuit 14 and four head assemblies 16-1 to 16-4 are connected thereto in the embodiment. Each of the head assemblies 16-1 to 16-4 has a recording head using an inductive head and a reproducing head using an MR head or the like. The enclosure 10 also has a VCM 18 for driving a head actuator and a spindle motor 20 for rotating a disk medium. For the head IC circuit 14 in the enclosure 10, a write channel circuit 28 and a read channel circuit 26 are provided on the control board 12 side. A hard disk controller 24 is provided for the write channel circuit 28 and the read channel circuit 26. A formatter, an ECC circuit, and the like are built in the hard disk controller 24. The hard disk controller 24 is connected to an interface circuit 36. The supply of write data from a host serving as an upper apparatus and the transfer of read data to the host are executed by a data transmission from/to the host side. As an interface circuit 36, a proper interface such as SCSI interface, ATA interface, ATAPI interface, SCSI, or the like can be used. In the embodiment, a constant density recording system (ZCDR) by a zone division is used as a recording system of a disk medium. Cylinders of the disk medium are divided

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into zones every predetermined number of cylinders and different frequencies have been preset for respective zones. For this purpose, a PLL circuit 30 functioning as a frequency synthesizer is provided. By setting a corresponding zone frequency from a cylinder address upon reading or writing operation, clocks are supplied to the write channel circuit 28 and read channel circuit 26. The whole control of the hard disk drive is performed by an MCU (main control unit) 22. The hard disk controller 24 and interface circuit 36 are connected to the MCU 22 via a bus and, further, an RAM 38 functioning as a work memory and a flash ROM 40 functioning as a non-volatile memory are connected. The MCU 22 receives and decodes various commands from the host, instructs the hard disk drive to perform an ordinary reading or writing operation by an ordinary command, and instructs a servo controller 34 to execute a head positioning control by the VCM 18 provided for the enclosure 10. In order to execute the head positioning control by the driving of the VCM 18, a servo demodulating circuit 32 and the servo controller 34 are provided. In the embodiment, as servo information of the disk medium, a data surface servo system is used. Therefore, servo information is separated from a reproduction signal for the read channel circuit 26 and head position information is reconstructed by the servo demodulating circuit 32.
